

PA 800 *plus* Catalog

Built on 20 years of innovation and leadership in the field of capillary electrophoresis, Beckman Coulter's PA 800 *plus* provides solutions for protein purity analysis, charge heterogeneity assessment, glycan characterization and small molecules. Systems, software, assay kits, capillaries, reagents, and system supplies for the PA 800 *plus* can be found here.

Systems/Software

Part Number			Description
A66528	PA 800 <i>plus</i> Pharmaceutical Analysis System		<p>The PA 800 <i>plus</i> Pharmaceutical Analysis System provides a comprehensive, automated, and quantitative solution for the characterization and analysis of proteins. Innovative system design ensures dependable operation and durability. The PA 800 <i>plus</i> application menu includes SDS-gel molecular weight analysis, charge heterogeneity analysis utilizing advanced capillary isoelectric focusing technology, and carbohydrate profiling for the assessment of glycoprotein microheterogeneity. Modular design provides for the simple interchange of detectors.</p> <p>The PA 800 <i>plus</i> System includes:</p> <ul style="list-style-type: none"> ▪ High-resolution separation module ▪ High-sensitivity UV, PDA, and solid-state laser-induced fluorescence detection ▪ Sample storage temperature control ▪ High-speed system controller with 32 Karat Version 9.0 and PA 800 <i>plus</i> software ▪ Validated applications for SDS-MW, IgG, cIEF, and glycan analysis ▪ Starter kit containing necessary hardware supplies to operate the system ▪ Installation qualification and operation qualification of the system ▪ System application installation and training
A66527	PA 800S <i>plus</i> Pharmaceutical Analysis System		<p>The PA 800S <i>plus</i> Pharmaceutical Analysis system provides an automated and quantitative solution for the analysis of protein purity and molecular weight utilizing SDS-gel capillary electrophoresis. The innovative system design ensures dependable operation and durability. Additional detectors are available for future upgrades.</p> <p>The PA 800S <i>plus</i> System includes:</p> <ul style="list-style-type: none"> ▪ High-resolution separation module ▪ High-sensitivity PDA detection ▪ Sample storage temperature control ▪ High-speed system controller with 32 Karat Version 9.0 and PA 800 <i>plus</i> software ▪ Validated applications for SDS-MW and IgG Purity and Heterogeneity ▪ Starter kit containing necessary hardware supplies to operate the system ▪ Installation Qualification and Operation Qualification of the system ▪ System application installation and training
338437	Test Kit, Capillary Performance		<p>Includes:</p> <ul style="list-style-type: none"> ▪ Capillary Regenerator Solution A (Part Number 338424) ▪ Performance Test Mix B (Part Number 501333) ▪ Capillary Performance Run Buffer A (Part Number 338426) ▪ Instructions

Assay Kits

Part Number

Description

A10663 IgG Purity and Heterogeneity Assay



The IgG Purity and Heterogeneity Assay has been developed for researchers employed in industrial biotechnology, who are developing and manufacturing IgG reagents for research, diagnostic and therapeutic use. This assay has been specified to assess the purity and heterogeneity of IgG reagents in both a reduced and non-reduced state. The methodology involves heat-denaturing at a specified concentration of IgG (both reduced and non-reduced) in the presence of SDS, and separating these proteins by size using high resolution capillary gel electrophoresis technology. This assay will detect impurities as low as 0.1% and includes an IgG control with a designated quantity of non-glycosylated heavy chain to test both the resolution and quantitation suitability of the assay prior to running unknowns.

Includes:

- Separation Capillary, 57 cm x 50 μ m ID bare fused-silica (qty 2)
- SDS Gel Separation Buffer (proprietary formulation) (140 mL)
- SDS Sample Buffer, 100 mM Tris-HCl, pH 9.0/1% SDS (50 mL)
- IgG Control Standard, 1 mg/mL in SDS sample buffer (1 mL)
- Internal Standard, 10 kDa protein, 5 mg/mL (0.4 mL)
- Acidic Wash Solution, 0.1 N HCl (100 mL)
- Basic Wash Solution, 0.1 N NaOH (100 mL)
- IgG Purity and Heterogeneity Assay Application Guide (qty 1)
- Kit Insert

390953 SDS-MW Analysis Kit



The SDS-MW Analysis Kit is designed for the sizing of protein-SDS complexes separated in a replaceable gel matrix. The gel is formulated to provide an effective protein sieving range of approximately 10 kDa to 225 kDa. Within this size range, the logarithm of protein molecular mass is linear with its reciprocal electrophoretic mobility, allowing the molecular weight of an unknown protein to be estimated from a standard curve of known protein sizes. This chemistry can also be used to quantify protein concentration and to determine the purity of a protein product.

Includes:

- Separation Capillary, 57 cm x 50 μ m ID bare fused-silica, qty 2
- SDS Gel Separation Buffer, 140 mL
- SDS Sample Buffer, 100 mM Tris-HCl, pH 9.0/1% SDS, 50 mL
- SDS Protein Sizing Standard (10 to 225 kDa) 16 mg/mL, 100 μ L
- Internal Standard, 10 kDa protein, 5 mg/mL, 0.4 mL
- Acidic Wash Solution, 0.1 N HCl, 100 mL
- Basic Wash Solution, 0.1 N NaOH, 100 mL
- SDS-Gel MW Analysis Guide
- SDS-MW Analysis Kit insert

A30341 SDS-MW Gel Buffer Multi-pack



SDS-MW Gel Buffer is a 4-pack of the SDS-MW gel used in the SDS-MW Kit (Part Number 390953) and the IgG Purity and Heterogeneity Kit Assay (Part Number A10663).

A80976 Advanced cIEF Starter Kit



The Advanced cIEF Starter Kit, in combination with the Advanced cIEF methods, and the PA 800 *plus* system result in cIEF separation with the highest level of precision for pI determination and isoform quantitation of your sample.

NOTE: Additional reagents from other vendors are required for this application.

Includes:

- pI Marker Kit (Part Number A58481)
- Neutral capillary (Part Number 477441)
- cIEF gel (Part Number 477497)
- Capillary Isoelectric Focusing (cIEF) Analysis, Application Guide
- cIEF Peptide pI Marker Kit Insert

A58481 pI Marker Kit



The pI Marker Kit contains five synthetic peptide markers:

4.1, 5.5, 7.0, 9.5, 10.0, which can be used to generate a standard curve for accurate assessment of pI's.

- Each vial contains 240 microliters of peptide
- The kit volume enables 100 cIEF runs
- Advanced cIEF Starter Kit is also available (Part Number A80976)
- cIEF Peptide pI Marker Kit Insert

Assay Kits (continued)

Part Number

Description

477600

Carbohydrate Labeling and Analysis Kit



The PA 800 *plus* Carbohydrate Labeling and Analysis Chemistry contains the reagents and separation capillary required to label, separate and quantify oligosaccharides and monosaccharides released from glycoproteins. Following release (enzymatic or chemical) from proteins, glycans are labeled with a fluorophore, APTS, at the reducing terminus by reductive amination. The stoichiometry of labeling is such that only one APTS molecule is attached to each molecule of oligosaccharide. These highly charged and fluorescent oligosaccharides are easily resolved in an electric field and detected using laser-induced fluorescence.

Includes:

- Carbohydrate Separation Buffer, 56 mL (Part Number 477623)
- N-CHO Coated Capillary, qty 2 (Part Number 477601)
- Labeling Reagents
 - Labeling Dye (APTS), 4 x 5 mg
 - Labeling Dye Solvent, 1 mL (Part Number 501309)
 - Glucose Ladder Standard, 50 mg
 - Quantitation/Mobility Marker (Maltose), 0.18 mg
- APTS-M (APTS extra purified for monosaccharide labeling)
- Carbohydrate Labeling and Analysis Guide
- Kit Insert

477445

Protein Methods Development Kit



The Protein Methods Development Chemistry Kit contains coated capillaries, buffers, standards, and markers to allow you to optimize a separation method for the analysis of a broad spectrum of proteins by their mass/charge characteristics. The use of a Neutral separation capillary minimizes the adsorption of proteins to the capillary surface and protects against hydrophobic interactions with the surface, improving the overall efficiency and resolution of the proteins being separated. For proteins that require minimal Electroosmotic Flow (EOF) and a neutral capillary surface.

Includes:

- Neutral Capillary, 50 μm (Part Number 477441)
- Orange G Reference Marker, 0.1% aqueous solution, 1 mL (Part Number 241524)
- Histamine Reference Marker, 1% aqueous solution, 1 mL (Part Number 477446)
- Citrate Buffer, pH 3, 50 mM, 100 mL (Part Number 477442)
- Citrate/MES Buffer, pH 6, 50 mM, 100 mL (Part Number 477443)
- Tricine Buffer, pH 8, 50 mM, 100 mL (Part Number 477444)
- Protein Test Mix (Part Number 477436): Lysozyme, 1 mg, Ribonuclease A, 1 mg, Cytochrome C, 3 mg
- Methods Development Guide

501310

Methods Development Kit





The P/ACE MDQ Methods Development Kit is designed to provide a starting point for the development of capillary zone electrophoresis analysis complex proteins, pharmaceuticals, or basic analytes. The kit includes both neutral (polyacrylamide-based) and amine-coated capillaries. Benzyl alcohol is included as a neutral EOF marker for the amine capillary, while histamine is used as a reference marker for the neutral capillary.



Includes:

- Amine Capillary
- A Neutral Capillary
- 20 mM citrate/MES Buffer, pH 6.0
- 50 mM Tris Buffer, pH 8.0
- Small Molecule Test Mix
- Protein Test Mix
- Histamine Reference Marker
- Neutral Marker
- Amine Regenerator Solution
- Care and use guide











Assay Kits (continued)

Part Number			Description
A53536	Anion Analysis Kit		<p>The Beckman Coulter Anion Analysis Kit contains the supplies necessary for separation and quantitation of inorganic anions and organic acids using the P/ACE MDQ or PA 800 capillary electrophoresis systems. Each kit yields approximately 500 tests.</p> <p>Includes:</p> <ul style="list-style-type: none"> ▪ Anion Coating, 38.5 mL ▪ Anion Separation Buffer, 115.5 mL ▪ Conditioner — Na, 38.5 mL ▪ Anion Acid Rinse, 38.5 mL ▪ Anion Internal Standard, 20 mL ▪ Anion Organic Test Mix, 3.5 mL ▪ Anion Inorganic Test Mix, 3.5 mL ▪ Capillaries, 50 cm, 75 micron ID, (pkg of 3) (Part Number 338454) ▪ Rinse Solution, 192.5 mL ▪ User Guide ▪ Ion Analysis Insert <p>NOTE: The 230 nm filter is required for running the Anion Analysis kit, and is sold separately.</p>
A53540	Cation Analysis Kit		<p>The Beckman Coulter Cation Analysis Kit contains the supplies necessary for separation and quantitation of small inorganic cations and aliphatic amines using the P/ACE MDQ or PA 800 capillary electrophoresis systems. Each kit yields approximately 500 tests.</p> <p>Includes:</p> <ul style="list-style-type: none"> ▪ Cation Coating A, 38.5 mL ▪ Cation Coating B, 38.5 mL ▪ Cation Separation Buffer, 115.5 mL ▪ Conditioner — Na, 38.5 mL ▪ Conditioner — Li, 38.5 mL ▪ Cation Internal Standard, 20 mL ▪ Cation Test Mix, 3.5 mL ▪ Capillaries, 50 cm, 75 micron ID, (Part Number 338454) (pkg of 3) ▪ Rinse Solution, 192.5 mL ▪ User Guide ▪ Ion Analysis Insert <p>NOTE: The 200 nm filter is required for running the Cation Analysis Kit, which is provided as one of the four standard filters on the P/ACE MDQ system. Please, check the condition of the filter as described on the P/ACE MDQ system manual.</p>
501333	Performance Test Mix B		<p>Performance Test Mix. Component of Capillary Performance Test Kit.</p>













Capillaries

Part Number			Description
338451	Bare Fused-Silica Capillary - 50 µm ID, 375 µm OD, 67 cm (pkg of 3)		<p>Capillary for use in PA 800 series and P/ACE MDQ Capillary Cartridges for separation and analysis of a variety of samples, including pharmaceuticals, industrial chemicals, chiral drugs, nucleic acids, amino acids, proteins, and peptides. Capillaries must be trimmed to optimize speed/resolution.</p> <p>Bare fused-silica capillary with laser burned window - 50 µm ID, 375 µm OD, 67 cm total length/50 cm effective length.</p>
338454	Bare Fused-Silica Capillary - 75 µm ID, 375 µm OD, 67cm		<p>Capillary for use in PA 800 series and P/ACE MDQ Capillary Cartridges for separation and analysis of a variety of samples, including pharmaceuticals, industrial chemicals, chiral drugs, nucleic acids, amino acids, proteins, and peptides. Capillaries must be trimmed to optimize speed/resolution.</p> <p>Bare fused-silica capillary with laser burned window - 75 µm ID, 375 µm OD, 67 cm total length/50 cm effective length.</p>
338472	Bare Fused-Silica Capillary - 50 µm ID, 375 µm OD, 5 m length		<p>Bare fused-silica capillary 50 micron internal diameter, 375 µm OD, 5 meter length.</p>

Capillaries (continued)

Part Number	Description	Image	Description
338473	Bare Fused-Silica Capillary - 75 μ m ID, 375 μ m OD, 5 m length		Bare fused-silica capillary 75 micron internal diameter, 375 μ m OD, 5 meter length.
338474	Bare Fused-Silica Capillary - 100 μ m ID, 375 μ m OD, 5 m length		Bare fused-silica capillary 100 micron internal diameter, 375 μ m OD, 5 meter length.
338475	Bare Fused-Silica Capillary - 20 μ m ID, 375 μ m OD, 37 cm (pkg of 3)		Capillary for use in PA 800 series and P/ACE MDQ Capillary Cartridges for separation and analysis of a variety of samples, including pharmaceuticals, industrial chemicals, chiral drugs, nucleic acids, amino acids, proteins, and peptides. Capillaries must be trimmed to optimize speed/resolution. Bare fused-silica capillary with laser burned window - 20 μ m ID, 375 μ m OD, 37 cm total length/20 cm effective length.
360801	Traditional CE-MS Interface Capillary - 50 μ m ID, 111 cm total length (pkg of 3)		111 cm capillary for use when interfacing Beckman Coulter's CE systems with mass spectrometers.
149053	Traditional CE-MS Interface Capillary - 70 μ m ID, 115 cm total length, 100 cm to the window (qty 3)		115 cm capillary for use when interfacing Beckman Coulter's CE systems with mass spectrometers.
360800	CE-MS Capillary - 75 μ m ID, 111 cm total length (pkg of 3)		111 cm capillary for use when interfacing Beckman Coulter's CE systems with mass spectrometers.
477431	eCAP Amine Capillary, 50 μ m ID, 65 cm Total Length		Capillary for use in PA 800 series and P/ACE MDQ Capillary Cartridges for separation and analysis of a variety of samples, including pharmaceuticals, industrial chemicals, chiral drugs, nucleic acids, amino acids, proteins, and peptides. Capillaries must be trimmed to optimize speed/resolution. Amine capillary with laser burned window - eCAP, 50 μ m ID, 65 cm Total Length.
477441	eCAP Neutral Capillary, 50 μ m ID, 67 cm Total Length		Capillary for use in PA 800 series and P/ACE MDQ Capillary Cartridges for separation and analysis of a variety of samples, including pharmaceuticals, industrial chemicals, amino acids, proteins and peptides. This capillary is also used with Advanced cIEF Starter Kit (Part number A80976). Capillaries must be trimmed to optimize speed/resolution. Neutral Coated Capillary with laser burned window - 50 μ m ID x 67 cm total length.
477477	eCAP DNA Capillary, 100 μ m ID, 65 cm Total Length		Capillary for use in PA 800 series and P/ACE MDQ Capillary Cartridges for separation and analysis of nucleic acids. Capillaries must be trimmed to optimize speed/resolution. Capillary with laser burned window - 100 μ m ID, 65 cm total length
477601	N-CHO Capillary, for N-Linked Oligosaccharide Profiling		Capillary for use in PA 800 series and P/ACE MDQ Capillary Cartridges. This capillary is used with the Carbohydrate Labeling and Analysis Kit (Part number 477600). Capillaries must be trimmed to optimize speed/resolution. N-CHO (PVA) Capillary with laser burned window - 50 μ m ID x 65 cm total length.

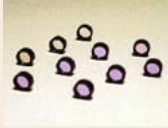
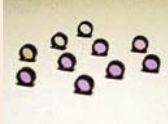
Capillary Cartridges and Supplies

Part Number	Description		
144645	Cartridge Rebuild Kit		Includes: <ul style="list-style-type: none"> ▪ Cleaving stone ▪ Capillary length tool ▪ O-ring Installation tool ▪ O-ring Aperture (qty 10) ▪ Tweezers (plastic) ▪ Instructions for Rebuild Kit
144660	OpCal Cartridge		Blank cartridge used for calibration of the PDA detector.
144689	Cartridge Tubing Kit		Consists of 20-, 30-, 40-, and 50 cm lengths of cartridge coolant tubing and all connectors.
144711	Aperture, 100 x 800 μm (pkg of 3)		UV and PDA Aperture, 100 x 800 μm
144712	Aperture, 100 x 200 μm (pkg of 3)		UV and PDA Aperture, 100 x 200 μm
144717	Cartridge Coolant Tube Kit,		Includes: <ul style="list-style-type: none"> ▪ Cartridge coolant tubing (100 cm total length) ▪ Tubing-molded nuts (qty 2) ▪ Ferrule (qty 2) ▪ O-ring (qty 2)
144738	Cartridge Assembly Kit, Blank		Includes: <ul style="list-style-type: none"> ▪ Cartridge body ▪ 100 x 800 μm aperture ▪ 100 x 200 μm aperture ▪ Tubing kit ▪ Nuts ▪ Ferrules ▪ O-rings
144829	External Detector Adapter Cartridge and Adapter Kit		External Detector Adapter cartridge with all tubing, clips, seals, etc., and the adapter couplings. Cartridge is designed to bypass onboard CE detectors.
144834	Tubing Kit, External Detector Adapter		Includes: <ul style="list-style-type: none"> ▪ Precut External Detector Adapter tubing ▪ Nuts ▪ O-rings ▪ Ferrules
144866	Double Seals with Clips (pkg of 4)		Replacement red cartridge seals for sealing around capillary ends. Suitable for 150-375 μm OD capillaries and all cartridge types.
144873	Single Seals with Clips (pkg of 4)		Seals around optics window of capillary cartridge.
149044	Blank Cartridge CE/MS Kit		Organic solvent resistant capillary cartridges for use with the PA 800 series and P/ACE MDQ instruments.
721125	LIF Cartridge Aperture Plug Assembly		For use with LIF Detection System. Requires probe guide (Part Number 721126). This part is included in LIF Upgrade Kits.

Capillary Cartridges and Supplies *(continued)*

Part Number			Description
721126	LIF Cartridge Probe Guide		For use with LIF Detection System. Requires Aperture Plug Assembly (Part Number 721125). This part is included in the LIF Upgrade Kit.
970297	O-Ring, Aperture, Cartridge (qty 1)		Cartridge Aperture O-Ring.

Filters

Part Number			Description
144430	Filter, 200 nm		A replacement filter for use with UV detection.
144431	Filter, 210 nm		A custom application filter for use with UV detection.
144437	Filter, 214 nm		A replacement filter for use with UV detection.
144432	Filter, 220 nm		A custom application filter for use with UV detection.
144433	Filter, 230 nm		A custom application filter for use with UV detection.
144438	Filter, 254 nm		A replacement filter for use with UV detection.
144434	Filter, 260 nm		A custom application filter for use with UV detection.
144439	Filter, 280 nm		A replacement filter for use with UV detection.
144435	Filter, 300 nm		A custom application filter for use with UV detection.
144436	Filter, 340 nm		A custom application filter for use with UV detection.








Filters (continued)

Part Number	Description		Description
144940	Filter, Emission Band Pass, 520 nm		A replacement filter for use with Laser Induced Fluorescence (LIF) detection. Used on CESI 8000, P/ACE MDQ and PA 800 series systems equipped with LIF.
144941	Filter, Notch, 488 nm		A replacement filter for use with Laser Induced Fluorescence (LIF) detection. Used on CESI 8000, P/ACE MDQ and PA 800 series systems equipped with LIF.
144942	Filter, Emission Band Pass, 655 nm		A replacement filter for use with Laser Induced Fluorescence (LIF) detection. Used on CESI 8000, P/ACE MDQ and PA 800 series systems equipped with LIF.
149068	Filter, Emission Band Pass, 560 nm		A replacement filter for use with Laser Induced Fluorescence (LIF) detection. Used on CESI 8000, P/ACE MDQ and PA 800 series systems equipped with LIF.

Vials and Caps

Part Number	Description		Description
144709	Vial, Micro, 200 μ L (pkg of 100)		Microvials can be used as vial inserts for small volume sample introduction into the CESI 8000, PA 800 series and P/ACE MDQ systems. Microvials fit into universal vials (Part Number A62251).
970668	Vial, 0.5 mL (pkg of 50)		Vials, 0.5 mL Used in P/ACE MDQ and PA 800 series systems.
A62250	Universal Vial Caps (pkg of 100)		Universal caps are used in combination with universal vials (Part Number A62251). Universal vial caps are designed for use only with CESI 8000, PA 800 <i>Enhanced</i> or PA 800 <i>plus</i> instruments and should not be reused.
A62251	Universal Vials (pkg of 100)		Universal vials are used in combination with universal caps (Part Number A62250) and can accommodate buffers/samples and retain micro-vials. These polymethylpentene vials are precision manufactured and have been compatibility tested with commonly used CE reagents. Universal vials are designed for use only with CESI 8000, PA 800 <i>Enhanced</i> or PA 800 <i>plus</i> instruments and should not be reused.
144657	Vial Holder (pkg of 50)		Plastic vial to hold 200 μ L sample vials (Part Number 144709). Gray vial cap (Part Number 144656) and Micro Vial Spring (Part Number 358821) required for use.
144647	Coolant Fill Kit		Includes: <ul style="list-style-type: none"> ▪ Syringe ▪ Coolant fill tool ▪ Connecting tubing
144667	Lamp Assembly, Deuterium, Replacement		Deuterium lamp replacement for the P/ACE MDQ and PA 800 series systems.






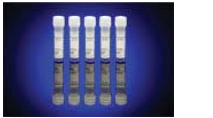


System Supplies

Part Number	Description		Description
144865	O-Ring, Buffer Reservoir, Replacement (pkg of 4)		Buffer reservoir replacement O-rings.
359976	Coolant, 450 mL		Capillary Coolant, 450 mL Recommended for use on the CESI 8000, P/ACE MDQ and PA 800 series systems.
A95348	Vial Cap Opener Assembly		The vial cap opener assembly contains two vial cap openers and return syringes allowing precision alignment and pressure sealing between vial caps and the separation interface. This component also provides protection for both capillary and electrode during instrument use. This vial cap opener is for use only with CESI 8000, PA 800 <i>Enhanced</i> or PA 800 <i>plus</i> instruments.
A58254	Vial Tray, 36 Buffer Vial Capacity (2 mL vials)		Buffer vial trays accommodate up to 36 universal vials (Part Number A62251) at a time. The trays feature a locking mechanism that fastens the universal vials tightly in place. This vial tray is designed for use only with CESI 8000, PA 800 <i>Enhanced</i> or PA 800 <i>plus</i> instruments.
A58255	Vial Tray, 48 Vial Capacity		Sample vial trays accommodate up to 48 universal vials (Part Number A62251) at a time. The trays feature a locking mechanism that helps retain the universal vials tightly in place. This vial tray is designed for use only with CESI 8000, PA 800 <i>Enhanced</i> or PA 800 <i>plus</i> instruments.
A58814	Sample Vial Tray Holder		The vial holder tray is designed to accommodate the 48 capacity sample vial tray (Part Number A58255) and can be stored in the instrument sample cooler. This vial tray is designed for use only with CESI 8000, PA 800 <i>Enhanced</i> or PA 800 <i>plus</i> instruments.
A59525	Electrode Replacement Tool		This tool is designed to facilitate removal and replacement of CESI 8000, PA 800 <i>Enhanced</i> and PA 800 <i>plus</i> electrodes (Part Number A47775).






Reagents

Part Number	Description		Description
A10663	IgG Purity and Heterogeneity Assay		<p>The IgG Purity and Heterogeneity Assay has been developed for researchers employed in industrial biotechnology, who are developing and manufacturing IgG reagents for research, diagnostic and therapeutic use. This assay has been specified to assess the purity and heterogeneity of IgG reagents in both a reduced and non-reduced state. The methodology involves heat-denaturing of a specified concentration of IgG (both reduced and non-reduced) in the presence of SDS, and separating these proteins by size using high resolution capillary gel electrophoresis technology. This assay will detect impurities as low as 0.1% and includes an IgG control with a designated quantity of non-glycosylated heavy chain to test both the resolution and quantitation suitability of the assay prior to running unknowns.</p> <p>Includes:</p> <ul style="list-style-type: none"> ▪ Separation Capillary, 57 cm x 50 µm ID bare fused-silica (qty 2) ▪ SDS Gel Separation Buffer (proprietary formulation) (140 mL) ▪ SDS Sample Buffer, 100 mM Tris-HCl, pH 9.0/1% SDS (50 mL) ▪ IgG Control Standard, 1 mg/mL in SDS sample buffer (1 mL) ▪ Internal Standard, 10 kDa protein, 5 mg/mL (0.4 mL) ▪ Acidic Wash Solution, 0.1 N HCl (100 mL) ▪ Basic Wash Solution, 0.1 N NaOH (100 mL) ▪ IgG Purity and Heterogeneity Assay Application Guide ▪ Kit Insert

Reagents (continued)

Part Number			Description
390953	SDS-MW Analysis Kit		<p>The SDS-MW Analysis Kit is designed for the sizing of protein-SDS complexes separated in a replaceable gel matrix. The gel is formulated to provide an effective protein sieving range of approximately 10 kDa to 225 kDa. Within this size range, the logarithm of protein molecular mass is linear with its reciprocal electrophoretic mobility, allowing the molecular weight of an unknown protein to be estimated from a standard curve of known protein sizes. This chemistry can also be used to quantify protein concentration and to determine the purity of a protein product.</p> <p>Includes:</p> <ul style="list-style-type: none"> ▪ Separation Capillary, 57 cm x 50 µm ID bare fused-silica, qty 2 ▪ SDS Separation Buffer, 140 mL ▪ SDS Sample Buffer, 100 mM Tris-HCl, pH 9.0/1% SDS, 50 mL ▪ SDS Protein Sizing Standard (10 to 225 kDa) 16 mg/mL, 100 µL ▪ Internal Standard, 10 kDa protein, 5 mg/mL, 0.4 mL ▪ Acidic Wash Solution, 0.1 N HCl, 100 mL ▪ Basic Wash Solution, 0.1 N NaOH, 100 mL ▪ SDS-Gel MW Analysis Guide ▪ SDS-MW Analysis Kit insert
391734	IgG Control Standard, (pkg of 3)		<p>The IgG Control Standard allows for experimental control when separating reduced or non-reduced IgG.</p>
A22196	SDS-MW Sizing Standard (pkg of 3)		<p>Molecular Weight standards (10 to 225 kDa), 16mg/mL (100 µL) for use with the SDS-MW Kit (Part Number 390953).</p>
A26487	10 kD Marker		<p>10 kD marker for use with the SDS-MW Kit (Part Number 390953) and the IgG Purity and Heterogeneity Assay Kit (Part Number A10663). Contains one tube of marker (400 µl).</p>
A30341	SDS-MW Gel Buffer Multi-pack		<p>SDS-MW Gel Buffer is a 4-pack of the SDS-MW gel for use with the SDS-MW Kit (Part Number 390953) and the IgG Purity and Heterogeneity Kit Assay (Part Number A10663).</p>
A80976	Advanced cIEF Starter Kit		<p>The Advanced cIEF Starter Kit, in combination with the Advanced cIEF methods, and the PA 800 <i>plus</i> system result in cIEF separation with the highest level of precision for pI determination and isoform quantitation of your sample.</p> <p>NOTE: Additional reagents from other vendors are required for this application.</p> <p>Includes:</p> <ul style="list-style-type: none"> ▪ pI Marker Kit (Part Number A58481) ▪ Neutral capillary (Part Number 477441) ▪ cIEF gel (Part Number 477497) ▪ Capillary Isoelectric Focusing (cIEF) Analysis, Application Guide ▪ cIEF Peptide pI Marker Kit Insert
A58481	pI Marker Kit		<p>The pI Marker Kit contains five synthetic peptide markers: 4.1, 5.5, 7.0, 9.5, 10.0, which can be used to generate a standard curve for accurate assessment of pI's.</p> <ul style="list-style-type: none"> ▪ Each vial contains 240 microliters of peptide. ▪ The kit volume enables 100 cIEF runs. ▪ Advanced cIEF Starter Kit is also available (Part Number A80976). ▪ cIEF Peptide pI Marker Kit Insert
477497	cIEF Gel Polymer solution		<p>Separation Buffer for performing capillary Isoelectric Focusing. (100 mL).</p>
477427	eCAP Tris Buffer, 50.0 mM, pH 8.0		<p>eCAP Tris Buffer, 50.0 mM, pH 8.0, 100 mL.</p>


Reagents (continued)

Part Number			Description
477600	Carbohydrate Labeling and Analysis Kit		<p>The PA 800 <i>plus</i> Carbohydrate Labeling and Analysis Chemistry contains the reagents and separation capillary required to label, separate and quantify oligosaccharides and monosaccharides released from glycoproteins. Following release (enzymatic or chemical) from proteins, glycans are labeled with a fluorophore, APTS, at the reducing terminus by reductive amination. The stoichiometry of labeling is such that only one APTS molecule is attached to each molecule of oligosaccharide. These highly charged and fluorescent oligosaccharides are easily resolved in an electric field and detected using laser-induced fluorescence.</p> <p>Includes:</p> <ul style="list-style-type: none"> ▪ Carbohydrate Separation Buffer, 56 mL (Part Number 477623) ▪ N-CHO Coated Capillary, qty 2 (Part Number 477601) ▪ Labeling Reagents <ul style="list-style-type: none"> –Labeling Dye (APTS), 4 x 5 mg –Labeling Dye Solvent, 1 mL (Part Number 501309) –Glucose Ladder Standard, 50 mg –Quantitation/Mobility Marker (Maltose), 0.18 mg ▪ APTS-M (APTS extra purified for monosaccharide labeling) ▪ Carbohydrate Labeling and Analysis Guide ▪ Kit Insert
477623	Carbohydrate Separation Buffer		<p>Separation buffer for use in Carbohydrate Labeling and Analysis Assay. Also included in Carbohydrate Labeling and Analysis Kit (Part number 477600).</p>
501309	APTS Labeling Dye, 2 x 5 mg		<p>8-Aminopyrene-1,3,6-Trisulfonic Acid (APTS). Labeling dye used in Carbohydrate Labeling and Analysis Assay.</p>
725898	APTS-M, extra purified for Monosaccharide Analysis, 21 mg		<p>8-Aminopyrene-1,3,6-Trisulfonic Acid M grade (APTS-M) imparts specificity, charge (for separation), and fluor (for LIF detection) properties upon a monosaccharide.</p>
477628	Gel Kit, eCAP dsDNA 1,000 (pkg of 3)		<p>For DNA fragment pattern recognition, quantitation of PCR fragments, and molecular sizing determinations. Typical resolution for fragments less than 400 base pairs is 5-15. Molecular size linearity from 100 to 1,000 base pairs. The dsDNA 1000 gel can also be used for high resolution oligosaccharide separation in combination with the Carbohydrate Separation Buffer (Part Number 477623). For details, see Application Note A-13376A "Separation of Fucosylated and non-Fucosylated Carbohydrates Associated with Monoclonal Antibodies using Capillary Electrophoresis".</p>
477445	Protein Methods Development Kit		<p>The Protein Methods Development Chemistries contain coated capillaries, buffers, standards, and markers to allow you to optimize a separation method for the analysis of a broad spectrum of proteins by their mass/charge characteristics. The use of a "Neutral" separation capillary minimizes the adsorption of proteins to the capillary surface and protects against hydrophobic interactions with the surface, improving the overall efficiency and resolution of the proteins being separated. For proteins that require minimal Electroosmotic Flow (EOF) and a neutral capillary surface.</p> <p>Includes:</p> <ul style="list-style-type: none"> ▪ Neutral Capillary, 50 μm (Part Number 477441) ▪ Orange G Reference Marker, 0.1% aqueous solution, 1 mL (Part Number 241524) ▪ Histamine Reference Marker, 1% aqueous solution, 1 mL (Part Number 477446) ▪ Citrate Buffer, pH 3, 50 mM, 100 mL (Part Number 477442) ▪ Citrate/MES Buffer, pH 6, 50 mM, 100 mL (Part Number 477443) ▪ Tricine Buffer, pH 8, 50 mM, 100 mL (Part Number 477444) ▪ Protein Test Mix (Part Number 477436): Lysozyme, 1 mg, Ribonuclease A, 1 mg, Cytochrome C, 3 mg ▪ Methods Development Guide

Reagents (continued)

Part Number			Description
241524	eCAP Orange G Reference Marker		Reference marker for reversed polarity applications (UV/DAD).
477446	Histamine Reference Marker		The Histamine Reference Marker is used as a reference marker for the neutral capillary.
338424	Regenerator Solution A, Capillary, 0.1 N sodium hydroxide		Capillary Regenerator Solution A 0.1 N sodium hydroxide (50 mL).
477442	eCAP Citrate Buffer, 20.0 mM, pH 3.0		eCAP Citrate Buffer, 20.0 mM, pH 3.0 (100 mL)
338426	Capillary Performance Run Buffer A, 100 mM Sodium Borate, pH 8.3		Component of Capillary Performance Test Kit (Part Number 338437) (50 mL).
477443	eCAP Citrate/MES Buffer, pH 6.0		20.0 mM Citrate, 20.0 mM/L MES (100 mL).
477444	eCAP Tricine Buffer, 20 mM, pH 8.0		eCAP Tricine Buffer, 20.0 mM, pH 8.0 (100 mL)
A53537	Anion Analysis Kit		<p>The Beckman Coulter Anion Analysis Kit contains the supplies necessary for separation and quantitation of inorganic anions and organic acids using the P/ACE MDQ or PA 800 capillary electrophoresis systems. Each kit yields approximately 500 tests.</p> <p>Includes:</p> <ul style="list-style-type: none"> Anion Coating, 38.5 mL Anion Separation Buffer, 115.5 mL Conditioner — Na, 38.5 mL Anion Acid Rinse, 38.5 mL Anion Internal Standard, 20 mL Anion Organic Test Mix, 3.5 mL Anion Inorganic Test Mix, 3.5 mL Capillaries, 50 cm, 75 micron ID, (pkg of 3) (Part Number 338454) Rinse Solution, 192.5 mL User Guide Ion Analysis Insert <p>NOTE: The 230 nm filter is required for running the Anion Analysis kit, and is sold separately.</p>

Reagents (continued)

Part Number			Description
A53540	Cation Analysis Kit		<p>The Beckman Coulter Cation Analysis Kit contains the supplies necessary for separation and quantitation of small inorganic cations and aliphatic amines using the P/ACE MDQ or PA 800 capillary electrophoresis systems. Each kit yields approximately 500 tests.</p> <p>Includes: Cation Coating A, 38.5 mL Cation Coating B, 38.5 mL Cation Separation Buffer, 115.5 mL Conditioner — Na, 38.5 mL Conditioner — Li, 38.5 mL Cation Internal Standard, 20 mL Cation Test Mix, 3.5 mL Capillaries, 50 cm, 75 micron ID, (Part Number 338454) (pkg of 3) Rinse Solution, 192.5 mL User Guide Ion Analysis Insert</p> <p>Note: The 200 nm filter is required for running the Cation Analysis Kit, which is provided as one of the four standard filters on the P/ACE MDQ system. Please check the condition of the filter as described on the P/ACE MDQ system manual.</p>
477436	eCAP Protein Test Mix		<p>Includes: Lysozyme, 1 mg Cytochrome C, 1 mg Ribonuclease A, 1 mg</p>
501310	Methods Development Kit		<p>The P/ACE MDQ Methods Development Kit is designed to provide a starting point for the development of capillary zone electrophoresis analysis complex proteins, pharmaceuticals, or basic analytes. The kit includes both neutral (polyacrylamide-based) and amine-coated capillaries. Benzyl alcohol is included as a neutral EOF marker for the amine capillary, while histamine is used as a reference marker for the neutral capillary.</p> <p>Includes: Amine Capillary A Neutral Capillary 20 mM citrate/MES Buffer, pH 6.0 50 mM Tris Buffer, pH 8.0 Small Molecule Test Mix Protein Test Mix Histamine Reference Marker Neutral Marker Amine Regenerator Solution Care and use guide</p>
338437	Test Kit, Capillary Performance		<p>Includes:</p> <ul style="list-style-type: none"> ▪ Capillary Regenerator Solution A (Part Number 338424) ▪ Performance Test Mix B (Part Number 501333) ▪ Capillary Performance Run Buffer A (Part Number 338426) ▪ Instructions
359976	Coolant, 450 mL		<p>Capillary Coolant, 450 mL Recommended for use on the P/ACE MDQ and PA 800 series systems.</p>
477422	eCAP Phosphate Buffer 50.0 mM, pH 2.5		<p>eCAP Phosphate Buffer 50.0 mM, pH 2.5, 100 mL.</p>
477433	Amine Regenerator Solution		<p>Regenerator solution for use with Amine Capillary (Part Number 477431).</p>

Reagents *(continued)*

Part Number	Description		Description
477434	Marker, Neutral		Neutral Marker for monitoring Electroosmotic Flow (EOF).
501333	Performance Test Mix B		Performance Test Mix. Component of Capillary Performance Test Kit.
726022	Test Mix, LIF, Sodium Fluorescein		Sodium Fluorescein solution of calibration of LIF Detector (20 mL).





System Accessories

Part Number	Description		Description
144093	Cable, Optics, UV/Vis		Replacement UV/Vis Filter optic cable for the CESI 8000, P/ACE MDQ and PA 800 series systems.
144094	Cable, Optics, DAD		Replacement PDA Filter optic cable for the CESI 8000, P/ACE MDQ and PA 800 series systems.
144645	Cartridge Rebuild Kit		Includes: <ul style="list-style-type: none"> ▪ Cleaving stone ▪ Capillary length tool ▪ O-ring Installation tool ▪ O-ring Aperture (pkg of 100) ▪ Tweezers (plastic) ▪ Installation Rebuild kit
144647	Coolant Fill Kit		Includes: <ul style="list-style-type: none"> ▪ Syringe ▪ Coolant fill tool ▪ Connecting tubing
144667	Lamp Assembly, Deuterium, Replacement		Deuterium lamp replacement for the P/ACE MDQ and PA 800 series systems.
144689	Cartridge Tubing Kit		Consists of 20-, 30-, 40-, and 50 cm lengths of cartridge coolant tubing and all connectors.
144711	Aperture, 100 x 800 μm (pkg of 3)		UV and PDA Aperture, 100 x 800 μm.

System Accessories (continued)

Part Number			Description
144712	Aperture, 100 x 200 μm (pkg of 3)		UV and PDA Aperture, 100 x 200 μm .
144717	Cartridge Coolant Tube Kit, 100 cm		Includes: <ul style="list-style-type: none"> ▪ Cartridge coolant tubing (100 cm total length) ▪ Tubing-molded nuts (qty 2) ▪ Ferrule (qty 2) ▪ O-ring (qty 2)
144733	Upgrade Kit, UV/Vis		Includes: <ul style="list-style-type: none"> ▪ UV/Vis Detector Module ▪ Filters (200 nm, 214 nm, 254 nm, 280 nm) ▪ Fiber optic cable
144738	Cartridge Assembly Kit, Blank		Includes: <ul style="list-style-type: none"> ▪ Cartridge body ▪ 100 x 800 μm aperture ▪ 100 x 200 μm aperture ▪ Tubing kit ▪ Nuts ▪ Ferrules ▪ O-rings
144822	Capillary adapter kit for External Detector Adapter (EDA)		Use this part with a standard cartridge to connect the outlet of the capillary to an external detector such as mass spectrometer. This kit includes a coolant manifold assembly, coolant tubing nuts, seals, fittings, and tubing.
144829	External Detector Adapter Cartridge and Adapter Kit		External Detector Adapter cartridge with all tubing, clips, seals, and the adapter couplings. Cartridge is designed to bypass onboard CE detectors.
144951	LIF Detector Dual Wavelength Option		Kit for conversion of single wavelength LIF detector to dual wavelength optics for existing P/ACE MDQ or PA 800 series users. Filters sold separately.
149044	Blank Cartridge CE/MS Kit		Organic solvent-resistant capillary cartridges for use with the PA 800 series and P/ACE MDQ instruments.
360672	LIF Detector Filter Holder		LIF detector filter holder.
726022	Test Mix, LIF, Sodium Fluorescein		Sodium Fluorescein Solution for Calibration of LIF Detector (20 mL).
728860	LIF 635 Laser Module		635 nm laser source for direct coupling to the PA 800 series and P/ACE MDQ systems.

System Accessories (continued)

Part Number		Description
969136	IEF Upgrade Module for the PA 800 and PA 800 <i>plus</i>	 <p>Includes UV detector, upgrade kit, and Advanced cIEF Starter Kit (Part Number A80976).</p>
A47775	Electrode Replacement Kit	 <p>The electrode has a PEEK sleeve, adding strength and rigidity. It features a snap-in design for easy removal and replacement. The platinum electrode is for use only with CESI 8000, PA 800 <i>Enhanced</i> or PA 800 <i>plus</i> instruments.</p>
A59494	Solid-State Laser and LIF Detector Upgrade	 <p>Requires a CESI 8000, PA 800S <i>plus</i> or a PA 800S <i>Enhanced</i> Pharmaceutical Analysis System. Includes a solid-state 488 laser and LIF detector module.</p>
A59525	Electrode Replacement Tool	 <p>This tool is designed to facilitate removal and replacement of CESI 8000, PA 800 <i>Enhanced</i> and PA 800 <i>plus</i> electrodes (Part Number A47775).</p>